

PIKES PEAK RADIO AMATEUR ASSOCIATION (PPRAA)

Activities/Meetings

- Ham Breakfast
Saturday, April 4th
La Casita
4295 N. Nevada Avenue
Join us between
8:00-9:30 AM
All are warmly invited
- PPRAA Board Meeting
Mon, April 6th
IHOP
- PPRAA general
membership meeting,
Wednesday, April 8th.
- 10 Meter/2 Meter net
Every Thursday 7:00 pm
28.390 MHz—USB
144.200 MHz-USB

Inside this issue:

Officers	2
Online Resources	
Monthly Activities	
Meeting Topics	3
Remote Station (reprint)	
Minutes: Board	4
Minutes: Membership	5
Skywarn Training	
Weep for Amateur Radio?	6
Merit Badges	7
-Signs, Signals, Codes	
-Radio	
CubeSat	8
Lighthouse Prime	
Megafest	9
Licensing	10
Decibel and SWR	11
Application	12
Scholarship	



Volume 65 Issue 04

April 2015

PPRAA Club Site lease signed

Friday, March 20th the lease with the Ellicott Volunteer Fire Department (EVFD) was signed by PPRAA president Raleigh Holcomb, N4HYF and Ed Corn, KCØTBE, of EVFD. The next day PPRAA members commenced work at the site. The following was completed:

1. the Butternut antenna was put together and raised. Three guides were attached and it looks great.

2. The antenna was tested and it works on 30 meters, 40 meters and 20 meters without tuning. The rest of the bands have SWR too high to use.

We used the black water tubing, 1" It needs another 30 feet or so added to the tubing.

3. The trailer and its contents were brought from the ranch. Phillip brought his 350 duty pickup and pulled the trailer from the ranch to the EVFD

Colorado Governor Signs Amateur Radio Antenna Bill

Although it was Friday the 13, March 2015 turned into a lucky day for the state's amateur radio community. What is now the law, Senate Bill 15-041 mirrors the PRB-I federal pre-emption policy.

Senate Bill 15-041, was introduced in January and sponsored by Sen Chris Holbert and Rep Kevin Van Winkle and passed the Colorado General Assembly without amendment. The bill specifies that no local government "shall enact or enforce an ordinance or resolution regulating Amateur Radio antennas that fails to conform" with PRB-I's "reasonable accommodation" provisions.

ARRL Colorado Section Government Liaison, Robert Wareham, NØESQ worked on formulating the bill which garnered no opposition. "There was absolutely no opposition from anyone at the time for this bill." ARRL Colorado Section Manager Jack Ciaccia, WMØG, enthused. "This was truly a bipartisan bill, and we had terrific support from both sides of the aisle in both chambers. For junior House member Kevin Van Winkle, this was his first bill ever presented, supported, and passed. He was thrilled to get his first bill signing pen."

The three-part PRB-I federal policy states that local

regulation of Amateur Radio antenna installations be based on health, safety, or aesthetic considerations; be crafted to reasonably accommodate Amateur Radio communications, and represent the minimum

practicable regulation to accomplish the legitimate purpose of the local government.

Robert Wareham, NØESQ, offered "an excellent opportunity to sell Amateur Radio and ARES" to the lawmakers, Ciaccia said.

Ciaccia went on to say "the politicians had lots of glowing remarks, because Colorado hams have been very much involved with emergency communications in many of their communities for many years now, during just about every wildfire." In addition to wildfires, the lawmakers were reminded that hams provided emergency communication during the 2013 flood evacuations in isolated areas.

Governor Hickenlooper took extra time out of his day to meet with and personally thank the ham contingent on hand at the signing for the service Amateur Radio does for the communities and state.

Ciaccia thanked all Colorado ARRL members and radio amateurs "who provided grassroots support for this legislation."





PPRAA Officers and Board of Directors

PPRAA Board of Directors consists of four elected officers, seven board members, as well as the past president (time limit dependent). The Ø-Beat editor is a board appointed position and is also a member of the board.

Officers include:

- ⇒ President
- ⇒ Vice-President
- ⇒ Secretary
- ⇒ Treasurer

To send board member's email, browse to the officers section of our website: <http://ppraa.org/about-ppraa/officers>

President	Raleigh Holcomb	N4HYF
Vice-President	Jim Bishop	KDØKQL
Secretary	Diana Nordstrom	KCØNPP
Treasurer	Pam Scott	WØPRS
Past President	Michael Derbort	KCØELG
Board Member	Dan Martin	KDØSMP
Board Member	Glenn Brodt	N3ULW
Board Member	Jim Rader	KDØNQM
Board Member	Charlie Coyner	KD6CBC
Board Member	Jim Harris	WØEM
Board Member	Virgil Yost	NØXRS
Board Member	Frank Roger	KB3PDT
Ø-Beat Editor	Dan Scott	WØRO

Online Resources

PPRAA Website

<http://ppraa.org>

The PPRAA website is the cornerstone for club related information, events, and technical information.

In addition you can register, pay dues, and submit donations. Donations to the PPRAA college scholarship fund are managed by FAR Scholarship Committee

Facebook / Google+

Follow activities as they unfold, or get reminders of upcoming events.

Links to both Facebook and Google+ social media sites can be found on the PPRAA.org.

Or from each social media site search on: Pikes Peak Radio Amateur Association

PPRAA Forums

The PPRAA forums are intended to allow users to exchange of ideas, ask and answer amateur radio related questions, and plan/discuss upcoming events.

This is a fantastic, but underutilized, tool. Check it out and register at: PPRAA.Forumotion.net

Monthly Activities

Membership Meeting

Held the 2nd Wednesday of the month starting at 7:00.

IHOP
5749 Stetson Hills Blvd
(just west of Powers Blvd)

NOTE: Many show up at 6 pm for kibitzing and grub.

Board Meeting

IHOP
5749 Stetson Hills Blvd

6:30pm—8:00pm
On the Monday preceding the membership meeting.

Board Meetings are open to all members.

Ham Breakfast

Location changes monthly: Check ppraa.org or table of contents, page I for the breakfast meeting location.

10 Meter/2 Meter Net

Every Thursday at 7pm
Starts on 28.390 USB then transitions to 2 Meter SSB at 144.200 USB.



Meeting Presentation Topics

Last Meeting

Charlie Coyner on his motorcycle amateur radio installation project that was in the Zero Beat last year.

April Meeting

Dan Martin & Buck Buchanan on the current status of the Lighthouse project.

May Meeting

Bdale Garbee, KBØG, will discuss the Fox satellite design, how to work them, and describe the next few satellites in the series and their payloads will be.

PPRAA Remote Station—Tutorial introduction

The following is a re-post of the remote station tutorial from the January 0-Beat. As we move towards completing the PPRAA station in Ellicott, we are looking at the remote station as being a major benefit to club members.

The station has moved to the residence of Doug, N7LEM.

Jim made an excellent presentation related to the trial of the remote station. I decided to repost this article.

1. Welcome to the tutorial for users of the PPRAA's remote HF Station. It contains information and references to information you need to know to operate the station.

2. You are responsible to operate in accordance with your license privileges and the rules established in Part 97 by the FCC. If you do not understand your privileges and FCC rules do not attempt to operate the station. Operating this station does not grant you any additional privileges beyond those already granted by the FCC.

3. Failure to operate in accordance with the above and station procedures and rules as established herein will result in denial of operating privileges.

4. Due to equipment limitations frequencies are limited on 80,40 and 10 meters. They are limited via software

and the limitations cannot be overcome by the client (user) operator. All other HF frequencies are available.

5. The FCC requires a three (3) minute time-out timer similar to a VHF/UHF repeater. That is software controlled at the remote station. A countdown timer will display in the S-meter area of the client software.

6. Revision control is by date displayed above. There is no approval process for this tutorial. Constructive feedback will be reviewed in good faith.

7. Once installed, the client software may give you access to nearly 100 remote station around the world including the PPRAA's remote station. Access to each remote station is granted by each remote station's administrator after reviewing your access request and license.

8. The client software allows many individuals to listen to the receiver. This is no different from listening on any frequency from your home station.

9. Transmission is coordinated among approved and logged in users.

10. The PPRAA remote station will use a "club" feature in the remote station software to limit users to club members only. It may be opened to others at a later date.

11. The client software will allow operation using any mode other than keyed CW which may be operated with the purchase of a separate hardware key interface. CW may be sent keyboard or software as audio tones.

12. Audio (voice) and CAT commands are currently sent by the client software. Once the station is relocated after initial testing, audio may need to be sent via Skype depending on router capabilities at the remote station location.

13. The club's Kenwood TS-450 transceiver has only about 12 CAT commands available. Thus all features on the radio cannot be remotely accessed. This is a limitation of the radio and not the client software.

14. When remote station testing is finished the licensed PPRAA membership will be provided with information to access the client software and the remote station. This is expected to be about mid-January 2015.

Jim WØEM



Club Station Work Party

We will have our next work party out there (Ellicott Volunteer Fire Department PPRAA Field Station) Saturday, April 4th. We want to get things spiffed up for the special event we plan to hold there on April 18th. It looks like Raleigh will be doing the cooking, weaning us off those subs & chips. Thank you Raleigh!

Please reply to me if you can make it. This should be a great time. We'll be tuning up and testing the Butternut Vertical and two temporary sloping wire horizontals. Also, if you want to see how we straighten a bent antenna, come on out.

73 Dan Martin KDØSMP
Email from
<http://ppraa.org/about-ppraa/officers>



PPRAA Board Meeting Minutes—9 March 2015

Call To Order – 6:37pm

Approval of the January and February Meeting Minutes – Dan S. moves to approve the minutes as published in the Zero-Beat and on the Website, Pam seconds, the board approves.

Committee reports

Treasurer's report - \$10,239.96, tax return has been filed

Antenna Report – pending lease agreement

Lease Agreement (Ed KCØTBE) – Still in lawyer's hands, the Fire Department's board is ready to go, and our contact would like us out there using the facilities

Megafest 2015 – Have tickets to sell, need to be taken to other clubs. The club has a table at Larcfest on April 4th

Field Day committee – Jim H. volunteered to provide computers and get them networked together before the event.

Zero Beat – Still need articles

PPRAA Activities – no one has shown any interest in furthering these ideas, special events stations are pending lease agreement

Tech Ed – Mike A. has 3 Extra students, Frank is still looking for teachers for a general class out in Falcon at the LDS church

HamCon Colorado 2016 – Dan motions to provide \$500 seed money to Hamcon, Doug N. seconds, the board approves.

Lighthouse Project – Looking to build a Net on Saturdays and an email list. For more information, visit Lighthouseprime.com or email Buck at buck@lighthouseprime.com

Remote Station – Going off air on Wednesday, as it is moving to Doug N.'s QTH

Club Manual – Tabled until next meeting

Business Conducted Via Email [*Ed. None*]

Dan M. motions for the board to authorize up to \$500 for materials to raise the butternut antenna and move the trailer to the Ellicott Fire Department on Saturday, March 21st, Pam seconds, the board approves.

Around the table [*Ed. None*]

Next Board Meeting: April 6th, Location: IHOP

Adjourn – Doug N. motions, Jim B. seconds, meeting adjourned at 8:16pm



From Colorado Springs, CO
On the Air Over 75-years

PPRAA

Pikes Peak Radio Amateur Association

PPRAA General Meeting Minutes—11 March 2015

Call To Order - 7pm

Introductions

Silent Key

Approval of the January and February Meeting Minutes - Charlie KD6CBC motions to approve as published in the Zero Beat and on the website, Jim R seconds, club passes.

Committee reports

Treasurer's report - \$10,239.96, Taxes have been filed with no issues

Lease Agreement (Ed KCØTBE) - Going ahead to put up antennas and radios. Antenna Raising Party on Saturday 21st, time TBD, contact Dan M. if you wish to help.

Megafest 2015 - Sales are going well, tickets are available, contact the board if you wish to buy! The club will be selling tickets at LARCfest on April 4th. Information is on the website if you wish to attend.

Field Day committee - Being held at Ellicott Fire Station on the 27th and 28th of June, going for 2 HF stations, a GOTA station, and whatever else we can get others to volunteer for! Contact the board if you want to help or run a station.

Zero Beat - Send articles to Dan S.! zero-beat@ppraa.org

Tech Ed - Latest tech student is KE0DIW, 3 Extra students, and a potential general student, talk to Mike A. WV7T, for tutoring or classes.

Frank is in the process setting up a formal General class. If you are interested in taking the class, in teaching the class or any other assistance, please contact him at rogers_f@hotmail.com.



ARES

- ⇒ Falcon 50 on May 2nd, Mountain Top Cycling Club on June 20th, need volunteers for all, contact John Bloodgood.
- ⇒ Skywarn Training on April 4th at the Police Station on Goddard St.

Legislative Update - PRB-1 bill has passed through both the Senate and the House. It's awaiting signature by the Governor. An extension for HR-1301 is being pushed, please visit arri.org for more information.

Remote Station - Coming down for a move to Doug N.'s QTH. Should be back up soon.

HamCon - 2015: Bryce Canyon, Utah starting July 31st.

HamCon—2016: Colorado is hosting, the committee is in the process of picking a location and potential dates are May 14-16. The board has approved \$500 for seed money to the Colorado committee.

10m Net - 28.390 USB, every Thurs at 7pm. Have 12-19 participants, looking for more!

Next General Meeting: April 8th, Location: IHOP

Adjourn - 7:43pm

ARES Skywarn training—4 April 2015

The annual
NWS Pueblo/SKYWARN Severe Weather Awareness and Spotter Training

Other dates found at: <http://www.crh.noaa.gov/pub/?n=wcm/talks.php>

Please note

4 April date is reserved for ARES only.

Check the site occasionally
dates and locations sometimes change there may be additions

November 4th, 1922 is the date of the strongest tornado in Colorado history. It started in southern Crowley County near Ordway and Sugar City before 5am and went on to move rapidly northward and struck the town of Holyoke around 9:30am. The distance between those two towns is about 180 miles, was haulin'!

Of course Skywarn didn't exist at the time, but it is a reminder that activation may be any time of day...!

Should we weep for amateur radio?

By Dan Romanchik, KB6NU



On an amateur radio mailing list that I subscribe to, one fellow wrote, "I weep for the state of amateur radio in the US, since this dispatch is apparently necessary..." He then pointed to an article on the ARRL website that reminded hams that while their local time

may be switching to daylight time, Universal Coordinated Time did not change (<http://www.arrl.org/news/view/change-local-clocks-this-weekend-but-not-utc>).

The implication, of course, was that we have dumbed down ham radio so much that a reminder like this was necessary.

This thread went on and on, eventually garnering 17 different replies. Before it morphed into a discussion of whether or not DST is a good idea in the first place, the replies echoed the sentiment in the original e-mail: *"It's become a push button, nanny state world, what do you expect, competence?"*

"We are truly in a time of appliance operating, not only in ham radio, but in practically every aspect of our lives. :-("

At first, I had the same reaction. I thought to myself, "How dumb are we getting in ham radio, if guys have to be reminded that UTC doesn't change when we switch to daylight savings time?" After thinking about this for a while, though, I've completely change my mind on this.

I work with a lot of newcomers to amateur radio, and many of them just don't know how UTC works. This is not their fault—they just haven't had the opportunity to deal with UTC. What these old timers (old farts?) didn't realize is that the ARRL article is not directed at them, but at the newcomers to ham radio.

I'll even go one step further. It's easy for us old-timers to be dismissive of newcomers' lack of knowledge, and then complain that amateur radio is getting dumber, but knee-jerk reactions don't usually help anyone involved. A much better approach would be to roll up your sleeves and teach them something. The only way newcomers are going to get to be old timers like us is if we help them learn stuff like this.

When not checking his stock of antenna parts, you'll find KB6NU working on updates to his "No Nonsense" study guides, blogging about amateur radio at www.kb6nu.com, or working 30m CW.



NEW BOOK!

The CW Geek's Guide to Having Fun with Morse Code is now available in PDF, Kindle, and Nook e-book formats.

Written in my "no nonsense" style, this book is designed to not only help you get started in CW, but to have fun doing it.

New Boy Scout merit badge “Signs, Signals, and Codes”

Boy Scout stores around the country are now receiving their first shipments of the newest merit badge, *Signs, Signals, and Codes*.

One of our newest members—Shannon Way (no call sign - a condition hopefully be resolved April 11th!) provided input to this important merit badge.

According to the Boy Scouts of America's (BSA) announcement last month the merit badge “assists Scouts in earning the new *Signs, Signals and Codes*” and will be used to instruct Scouts in Morse code, ASL (American Sign Language, the third-most-used language in the U.S), Braille, signaling, trail markings, and other nonverbal communications.”



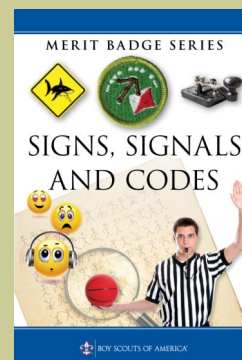
Shannon became involved in the development of the new merit badge when he learned that the BSA was seeking subject matter experts in several fields that he has experience in via the military and Civil Air Patrol.

“My initial reason for putting my name in the hat for this development team was that I wanted to ensure that Scouts were knowledgeable about the challenges of being rescued

when lost and knowledge of some tools that can help them be found.

Shannon stated that “Once the merit badge was published, the response I got was wonderful... but also worried me that I may have to know something about radio to have credibility as a merit badge counselor. Not a week later I was at my first PPRAA meeting and hope to achieve my technician ticket next month.”

A portion of the book includes rescue signals, sending or receiving a message in Morse code, semaphore, wig-wag, and sound signals.



Boy Scout merit badge “Radio Merit Badge”

The following article is a segment found on:
www.hamradioschool.com.



The *Ham Radio School .com* article continues into beyond the segment on this page and details the information a scout needs to obtain their radio merit badge or helps an instructor by being an invaluable resource. This doc it written for the scout.

HamRadioSchool.com is happy to help you earn your BSA Radio Merit Badge! Radio is a fascinating science, hobby, and career choice. Learning to use

radios for two-way communication can help you be prepared for emergencies by providing reliable communications when telephone systems fail or where they do not reach. You can even use radio to communicate from remote areas when backpacking or camping, and participate in many other fun and valuable activities in your community!

You can earn your FCC Amateur Radio Technician License and become a license ham radio operator. Earn your merit badge and you are part way there. Keep studying for your license!

The BSA Radio Merit Badge was first offered way back in 1919. Radio technology and use has grown quite a lot since those days, and this site will help you to learn all about it. This site will help you get a good introduction to radio while earning your

merit badge, but don't stop there! With just a little more study you can earn your FCC Amateur Radio Technician License and become a ham radio operator, able to talk around the world with other operators. It's a lot of fun, so let's get going!

Ham Radio School.com is a unique licensing resource. Their learning system includes “The Book”, “The Web Site”, and “The Apps”.

“With HamRadioSchool.com you will really get it”

In the past, PPRAA has hosted many merit badge classes for both Boy Scouts and Girl Scouts. Badges included the Radio Merit Badge, Emergency Preparedness, First-Aid, and others.





Bdale discussing fox satellites (top). Bdale with a high power rocket (below).



PPRAA April Meeting

Lighthouse Prime
Subject of the April
meeting with Dan Martin
& Buck Buchanan.

CubeSat Launch initiative (CSLI)



This article was verbatim from the [NASA](#) web site.

[NASA's CubeSat Launch initiative \(CSLI\)](#) provides opportunities for small satellite payloads to fly on rockets planned for upcoming launches. These CubeSats are flown as auxiliary payloads on previously planned missions.

CubeSats are a class of research spacecraft called nanosatellites. The cube-shaped satellites are approximately four inches long, have a volume of about

one quart and weigh about 3 pounds. To participate in the CSLI program, CubeSat investigations should be consistent with NASA's Strategic Plan and the Education Strategic Coordination Framework. The research should address aspects of science, exploration, technology development, education or operations.

By providing a progression of educational opportunities including CSLI for students, teachers, and faculty, NASA assists the Nation in attracting and retaining students in STEM disciplines. This strengthens NASA's and the Nation's future workforce. Further, the CSLI promotes and

develops innovative technology partnerships among NASA, U.S. industry, and other sectors for the benefit of Agency programs and projects. NASA thus gains a mechanism to use CubeSats for low-cost technology development or pathfinders.

Satellites selected to date come from 29 states: Alabama, Alaska, Arizona, California, Colorado, Connecticut, Florida, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Missouri, Montana, New Mexico, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia and Wisconsin.

Lighthouse Prime

The [Lighthouse Prime](#) community crisis communications initiative in El Paso county, is a program for training and support for neighbors interested in sustaining good communications and resilient communities in times of trouble.

The two focus areas for Lighthouse Prime are:

1. Information and encouragement to the community families and individuals to
 - A. prepare for potential emergency conditions
 - B. be as self-sufficient as possible in a large scale emergency scenario

- C. Organize for mutual support in the event of an extended loss of public services

2. Resilient communications network infrastructure of amateur radio operators to:
 - A. link neighborhoods and emergency services
 - B. Multi-way communications to support various communications flows.



Pikes Peak Radio Amateur Association, Inc.



Megafest – July 11th
RAFFLE PRIZES



Yaesu FT-991 value \$1,670

ICOM ID-5100A Dual Band D-Star – value \$725

Donated by Cheyenne Mountain Repeater Group
 Programming software donated by RT Systems

Yaesu FT-7900R – value \$324

Programming software donated by RT Systems

Yaesu FT-60R – value \$150

Programming software donated by RT Systems

Rig Expert AA-54 antenna analyzer – value \$350

Butternut HF6XV – antenna – value \$390



HF6XV

Tickets:

\$1	1 ticket
\$5	6 tickets
\$10	15 tickets
\$20	40 tickets

You don't have to be present to win!



VE Testing & Education—Colorado Springs (PPRAA)

Pikes Peak Radio Amateur Association (PPRAA)

When:
Feb, Apr, Jun, Aug, Oct, Dec
2nd Saturday at 9 AM

Location:
Colorado Technical University (CTU)
4435 North Chestnut
Colorado Springs, CO 80907

Directions available at:
ppraa.org/ve-testing

or contact:
Dan Martin
VE@PPRAA.org



Mike Anderson, WV7T does personal and small group training for all license classes.

Mike also does Morse code training.

Mike can be reached at:
719-229-8610
wv7t@aol.com

VE Testing Woodland Park (MARC)

MOUNTAIN AMATEUR RADIO CLUB (MARC)

When:
Jan, Mar, May, Jul, Sep, Nov
1st Saturday at 10 AM

Location:
Woodland Park
Woodland Park Library-
Community Meeting RM
218 East Midland Avenue

Directions:
<http://www.nx0g.org/ve.html>

or contact
Wes Wilson (KØHBZ)
k0hbz@arrrl.net
Call (719) 687-8758



Applicants will need the following items:

1. A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).
2. Your FRN or SOCIAL SECURITY NUMBER (now required – this includes children).
3. Your CURRENT ORIGINAL amateur radio license (if any) and a PHOTOCOPY for the VE Team to keep.
4. The CURRENT ORIGINAL CSCEs you have and a PHOTOCOPY for the VE Team to keep.
5. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be made out to ARRL. This covers all exams you wish to take at this VE session.

NOTE: PPRAA and MARC VE Team policy, as with many VE

Teams, is to not allow same day retests on failed exams.

PPRAA – Colorado Springs testing only:

Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association

Practical Use of Decibel and SWR Values. I—April 2015

The purpose of this article is to help explain how complex measurements or terms can be used and understood in a practical way. Therefore, many of the statements are not an exact science, but what can happen in real applications.

Standing Wave Ratios (SWR) and Decibels (dB), are terms used regularly among the Amateur Radio Community. If you had not had in depth technical training of what this stuff is on paper, it can appear a bit hazy. Actually it can be hazy to those of us that were supposed to learn it.

DECIBEL: A term used commonly representing a loss or gain ratio of Radio Frequency power, voltage or current.

Two related values are needed to calculate dB.

For example, power applied to an amplifier, compared to the power coming out of an amplifier. We express this in dB. Why?

Incredibly, our ears are on a logarithmic response. My, how did that happen? Oops! I did not intend to get religious.

The formula for dB power is not too bad. $\text{dB} = 10 \times \log P2/P1$.

$P1$ = power in, $P2$ is power out.

As an illustration, if a person estimates that the signal is "twice as loud" when the transmitter power is increased from 10 watts to 40 watts, he will also estimate that a 400 watt signal is twice as loud as a 100 watt signal. The human ear has a logarithmic response.

This fact is the basis for the use of the relative-power unit called the decibel (dB).

Our receiver is a sophisticated Field Strength meter. It takes a power value from the air and puts a number to it on our S-Meters. How can this compare to dB?

There is still not a set standard among radio manufactures of how many dB it takes to move

1 S unit. However, most will provide this rating for there own radios.

For example, 1 S-unit is equivalent to a 6dB ratio. That would indicate you would hear the change in signal 6 times from one S-unit to the next, whether you are going up or down in signal strength.

When you operate your stations, keep this in mind as you watch your S-Meter in respect to comparing antennas, directive measurements and power levels. This will give you a better understanding of what changes in actual measurements are relevant, or significant, and which are not.

Boy, I'm at the end of the page and I hardly got started. Well, we have something for next month.

73,

Ralph WD0EJA

APRIL 2015

www.isotronantennas.com

137 MANCHESTER DR.



ISOTRON 20/15/10
ONE FEEDLINE, NO
RADIALS.
SIMPLE AND AFFECTIVE.

I have been publishing this technical article since January of 2013. For the past 35 years I have manufactured the Isotron Antennas. This also involved helping many with their very difficult installations. Some of the information will be from what we learned solve these problems. Some information will be right from a text book or credible article.

You are welcome to contact me at:
wd0eja@isotronantennas.com
with questions you may have.

**PIKES PEAK RADIO
AMATEUR
ASSOCIATION**

Send membership application to:

Pikes Peak Radio Amateur
Association, Inc.
P.O. Box 16521
Colorado Springs, CO 80935

General Questions:
ppraa@ppraa.org

ØBeat:
zerobeat@ppraa.org



ppraa.org

Get Radio Active, get on the air!

Membership Application:

Date: ____ / ____ / ____ New Membership: Yes / No

Name: _____

Address: _____

City/State/Zip: _____

Call: _____ Class: ____ Phone # (____) _____

Email: _____

Are you a ARRL member: Yes / No

Additional Family Members:

Name1: _____ Call: _____ Class: ____ ARRL Member: Yes / No

Name2: _____ Call: _____ Class: ____ ARRL Member: Yes / No

Name3: _____ Call: _____ Class: ____ ARRL Member: Yes / No

____ \$15.00 Full Member

____ \$10.00 Full Member over 65

____ \$18.00 Family Membership

____ \$12.00 Family Membership over 65

\$____ Membership Amount

\$____ Scholarship Fund Donation

\$____ PPRAA General Fund Donation

\$____ Total

2015 Scholarship Fund

There are multiple ways to donate to the PPRAA Scholarship Fund.

1. Use the form found on this page and send it, along with a check to PPRAA.
2. On the PPRAA web site you can donate via PayPal
3. At club meetings
4. Directly to the our scholarship fund.

Make checks to:
PPRAA Scholarship

The scholarship fund can be reached at:

FAR Scholarship Committee
P.O. Box 911
Columbia, MD 21044

Ø- Beat Banner

Photo by Dan—WØRO.

This high dynamic range (HDR) photograph was taken March 15th from Garden of the Gods.

The theme of the banner is Pikes Peak. If you would like to submit pictures for the Ø-Beat banner, please send them to:
zerobeat@ppraa.org

Please Include "[Ø-beat]" as part of the subject line.